

## ABSTRACT

**INTEGRAL HEATSINK PLASTIC BALL GRID ARRAY**

A plastic ball grid array semiconductor package, employs a large heat spreader, externally attached to the upper surface of the mold cap, to provide improved thermal performance in a thin package format. The plastic ball grid array structure in the package can be constructed substantially as a standard PBGA, although in some embodiments the PBGA has a thinner molding than usual for a standard PBGA, or the wire bonding has a lower loop profile than usual, or the semiconductor device is thinner than usual. The invention can be particularly useful in applications where greater power dissipation is required, or where thin form factors and small footprints are desired.

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